

## AB147. 14. Colorectal post-operative infective complications worsen oncological outcomes—a meta-analysis

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**Background:** Optimising cancer outcomes is a complex interaction involving key strategies; prevention, early detection and optimal management. Negative outcomes need better understanding. A meta-analysis was undertaken to assess effects of postoperative infective surgical complications on oncological outcomes of colorectal cancer patients.

**Methods:** An ethically approved PROSPERO registered review was conducted following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines using databases PubMed and Scopus for studies that met eligibility criteria for articles between 2007 and 2017 reporting the effect of infective complications on oncological survival in colorectal cancer. Results were separated into infective complications, surgical site

occurrence (SSO) superficial, deep and anastomotic leakage. Articles were then graded with methodological index for non-randomized studies (minors) grading (cut-off: 18/24). Data was analysed using RevMan5.

**Results:** Of the 5,027 articles reviewed, 72 articles met inclusion criteria. Infective complications occurred in 7.6% (0.8–54.7%) and had a significant negative effect on overall survival (HR: 1.39; 95% CI: 1.30–1.49), cancer specific survival (HR: 2.58; 95% CI: 2.15–3.10). Anastomotic leakage [incidence 6.43% (range, 2.52–45.6%)] showed a negative impact on disease-free survival (HR: 1.14; 95% CI: 1.09–1.20), overall survival (HR: 1.34; 95% CI: 1.28–1.39), cancer specific survival (HR: 1.43; 95% CI: 1.31–1.55), local recurrence (HR: 1.18; 95% CI: 1.06–1.32) and overall recurrence (HR: 1.46; 95% CI: 1.27–1.68).

**Conclusions:** This meta-analysis, one of the first to report oncological impact of post-operative infective complications identified a significant negative impact on both overall survival and cancer specific survival. Strategies that have been shown to reduce these complications need to be implemented as a priority to improve cancer survival.

**Keywords:** Colo-rectal cancer; oncological outcomes; meta-analysis; infective complications; anastomotic leakage

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